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Cotton Fiber and Processing Test Results

CROP OF

1978



**Agricultural Marketing Service
U.S. DEPARTMENT OF AGRICULTURE
Memphis, Tenn. 38122 January 12, 1979**

These reports are published bi-weekly during the harvesting season and will be summarized in a comprehensive report at the end of the crop year. A detailed description of the tests shown in this report may be found in the summary report for the previous season.1/ These reports are available on request from the Standards Section, Cotton Division, Agricultural Marketing Service, U.S. Department of Agriculture, 4841 Summer Avenue, Memphis, TN. 38122.

1/ Summary of Cotton Fiber and Processing Test Results, Crop of 1977, USDA, AMS, Cotton Division, August 1978.

COTTON FIBER AND PROCESSING TEST RESULTS, CROP OF 1978

Discussion of Test Results

Cottons tested from the Southwest through January 5 in the short staple range are shorter and less uniform than a year ago, according to the Cotton Division, Agricultural Marketing Service, USDA. Cottons are finer and stronger at zero gage strength tests. Both Shirley Analyzer and picker and card waste are higher than last season at this stage of the harvest. Yarns spun from these samples are weaker but have higher appearance grades. Imperfections are lower. The spinning potential yarn number is lower.

Medium staple samples tested from the Southeast are longer, finer and stronger than a year ago. Shirley Analyzer nonlint content is higher while picker and card waste is slightly lower. Yarns spun from these samples show skein strength to be higher. Yarn imperfections are lower. The spinning potential is higher.

South Central medium staple samples tested show fibers to be shorter and stronger at zero gage than a year ago. Picker and card waste is higher. Yarns spun from these samples are weaker but show a lower imperfection count. The spinning potential is lower.

Medium staple samples tested from the Southwest are considerably shorter, less uniform, coarser and stronger than a year ago. Both Shirley Analyzer nonlint content and picker and card waste are higher. Yarns spun from these samples are slightly weaker and have lower appearance grades. Yarn imperfections are lower. The spinning potential is lower.

Medium staple samples tested from the West to date show cotton fibers to be longer, less uniform and slightly coarser than a year ago. Both Shirley Analyzer and picker and card waste are higher. Yarns spun from these samples show approximately the same yarn quality characteristics as a year ago.

Average results for all medium staple samples tested show fibers to be less uniform and stronger than a year ago. Both Shirley Analyzer nonlint content and picker and card waste are higher. Yarns spun from these samples show slightly lower appearance grades. Yarn imperfections are lower. The average spinning potential yarn number is lower.

No long staple lots were received from the Southeast or South Central areas during this period.

Long staple samples tested from the West are shorter, less uniform, finer and weaker than a year ago. Picker and card waste is higher. Carded yarns spun from these samples are weaker. The spinning potential is lower.

Table 1.--Cotton:

Averages of fiber and processing tests from selected gin points in the United States
through January 5, 1979

Staple group Area, and Crop year	Lots tested	Fiber test results										Processing test results						
		Fibrograph		Mike fine- ness	Fiber strength		S A nonlint	P & C waste	Yarn quality		Spin. Potent.							
		2.5% span	Inches		Pct.	Rdg.			Mpsi	G/tex		Pct.	Pct.	Lbs.	Index	No.	Yarn No.	
				50/2.5 unif.			Zero gage	1/8" gage			Appearance							Imperf- actions
Short Staple: Southwest	1977	94	.98	46	42	88	22	3.2	5.4	99	109	13	3/	49.				
	1978	46	.96	45	40	89	22	4.3	7.3	95	117	9	(14)	42				
Medium Staple Southeast	1977	39	1.08	45	47	85	22	3.2	6.1	96	92	21	-	51				
	1978	36	1.10	45	45	86	23	3.5	6.0	108	92	15	(77)	58				
South Central	1977	123	1.11	45	46	86	23	3.5	6.0	104	95	22	-	57				
	1978	124	1.09	45	46	88	23	3.5	6.5	100	95	13	(55)	51				
South West	1977	48	1.08	46	42	86	22	3.2	5.7	100	90	19	-	54				
	1978	41	1.03	45	43	89	22	4.4	6.5	99	82	16	(80)	50				
West	1977	86	1.11	46	43	93	26	2.6	5.3	118	86	22	-	67				
	1978	79	1.14	45	44	94	25	2.8	5.7	118	85	21	(11)	67				
U.S. Average	1977	296	1.10	46	45	88	23	3.2	5.8	106	91	21	-	59				
	1978	280	1.10	45	45	90	24	3.4	6.2	106	90	16	(77)	56				
Significant dif- ference	2/	0.02	2	0.2	2	1	0.5	0.5	4(22s)	5	2	3						

1/ Based on a limited number of samples of modal quality
 2/ Minimum differences considered to be significant for comparisons in this table.
 3/ Parentheses indicate the neps per 1000 yards of yarn as measured by the Uster instrument.

Table 1.--Cotton: Averages of fiber and processing tests from selected gin points in the United States through January 5, 1979 1/ (Continued)

Staple group, Area, and Crop year	Lots	Fiber Test Results										Processing Test Results									
		Length			Mike	Strength		SA Non- lint	P&C Waste	Comber Waste	Yarn Quality					SPY					
		Span	Unif	Zero gage		1/8" gage	Pct.				carded	Strength carded	Lbs. carded	Indx combed	Appearance carded		Indx combed	Imprfctns card	comb		
																				In.	Pct.
No.	No.	In.	Pct.	Rdg.	Mpsi	G/tx	Pct.	Pct.	Pct.	Lbs.	Lbs.	Indx	Indx	No.	No.	No.					
22s Carded & Combed Yarn																					
Long Staple Southeast	12	1.13	45	48	88	23	3.5	7.1	-	3/ -	99	-	102	-	18	-	58				
	15	1.12	44	44	85	24	3.4	7.7	-	16.6	111	128	106	126	12	3	59				
	3	1.16	45	45	92	24	4.3	7.2	-	-	106	-	97	-	24	-	63				
South Central	3	1.18	43	42	91	26	4.3	8.7	17.4	-	110	133	93	123	22	6	66				
West	9	1.18	46	40	92	27	3.5	6.2	-	-	130	-	89	-	27	-	93				
	4	1.14	44	39	89	25	3.5	8.3	17.5	-	117	138	90	42	28	10	74				
ARRAY																					
AMERICAN PIMA																					
COMBED YARNS																					
Extra Long Staple: West	3/ -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
	9	1.50	33	38	103	35	3.1	7.6	15.1	-	65	-	114	-	1	-	-				
	9	1.50	33	38	103	35	3.1	7.6	15.1	-	65	-	114	-	1	-	-				
Significant Difference 2/	0.02	2	0.2	2	1	0.5	0.5	0.5	0.5	0.5	4(22s)	4(22s)	5	5	2	2	3				
	0.02	2	0.2	2	1	0.5	0.5	0.5	0.5	0.5	4(22s)	4(22s)	5	5	2	2	3				
	0.02	2	0.2	2	1	0.5	0.5	0.5	0.5	0.5	4(22s)	4(22s)	5	5	2	2	3				

1/ Based on a limited number of samples of modal quality
2/ Minimum differences considered to be significant for comparisons in this table.
3/ Data not available except in the summary.

Table 2 --Cotton, American upland short staple: Quality characteristics by production areas, crop of 1978.

Production Area, Classification &				Fiber Test Results										Processing Test Results - Carded Yarns										
Sample Number		Digital Fibrograph		Mike	Fiber Strength		Elon-gat'n 1/8"	S.A. Non-lint		Color Raw Stock		P & C Waste	Strength		Elongation		Appearance Index		Imprfct'ns Neps/M Yards		Spin. Potent-ial			
Grade	Name & Code	2.5% span	Unif		Zero Gage	1/8" Gage		Pct	Pct	Gra	Yel		Pct	Pct	8s or 7 1/4 tx	22sor 27 tx	8s or 7 1/4 tx	22sor 27 tx	8s or 7 1/4 tx	22sor 27 tx		8s or 7 1/4 tx	22sor 27 tx	
No	32s			In	Pct	Rdg	Mpsi	G/tex	Pct	Pct	No	No	Pct	Lbs	Lbs	Pct	Pct	No	No	No	No			
SOUTHWEST AREA																								
NORTHWEST TEXAS																								
KRESS																								
1	S LM	41	32	1.01	42	32	84	22	6.7	3.4	2	3	6.2	80 PERCENT		280	94	7.2	6.6	120	100	28 (22)	10 (0)	43
2	S LM LT SP	42	32	0.98	45	38	89	22	5.9	3.1	3	4	7.4	290	96	7.0	6.8	130	110	30 (8)	11 (6)	44	1/	
LAMESA																								
2	S LM LT SP	42	30	0.91	42	36	88	22	7.2	4.3	2	4	7.6	75 PERCENT		270	88	7.3	6.5	130	110	29 (14)	10 (2)	33
LORENZO																								
3	S LM LT SP	42	32	1.00	42	36	87	22	6.3	3.7	3	3	6.1	279	93	7.0	6.1	130	110	24 (10)	9 (0)	46	4	
PADUCAH																								
1	S LM LT SP	42	31	1.98	44	46	82	21	7.0	4.2	2	4	7.2	75 PERCENT		286	93	7.5	6.6	130	110	24 (18)	12 (2)	48
PLAINS																								
1	S LM	41	33	1.03	43	30	84	23	7.9	5.3	1	3	8.0	70 PERCENT		298	101	8.7	7.5	120	120	33 (6)	12 (2)	53
PLAINVIEW																								
2	S LM LT SP	42	32	0.97	45	35	83	22	6.7	4.9	3	3	8.4	75 PERCENT		292	95	7.8	6.8	130	110	42 (4)	13 (0)	48
POST																								
2	S LM LT SP	42	31	0.96	44	42	89	24	7.0	4.0	3	3	6.8	80 PERCENT		297	96	7.5	6.5	120	120	23 (4)	8 (0)	42
SUDAN																								
3	S LM LT SP	42	32	0.98	44	37	87	23	6.6	3.6	3	3	7.6	80 PERCENT		293	98	7.2	6.5	130	120	26 (18)	10 (0)	46
TOKIO																								
1	LM	51	33	0.96	44	33	83	24	7.8	5.5	3	3	8.8	80 PERCENT		303	98	7.9	7.0	130	130	30 (8)	10 (4)	51
TULIA																								
1	LM LT SP	52	31	0.92	45	41	89	23	6.8	5.5	3	3	9.5	75 PERCENT		279	91	7.3	6.3	130	120	31 (10)	11 (0)	44

1/ Parentheses indicate the neps per 1000 yards of yarn as measured by the Uster instrument.

2/ Reduced from 32 because of bark.

3/ Reduced from 42 because of bark.

Table 2 --Cotton, American upland short staple: Quality characteristics by production areas, crop of 1978.

Production Area, Classification & Sample Number				Fiber Test Results										Processing Test Results - Carded Yarns										
Sample Number		Grade	Stple	Digital Fibrograph		Mike	Fiber Strength		Elon-gat'n 1/8"	S.A. Non-lint		Color Raw Stock		P & C Waste	Strength		Elongation		Appearance Index		Imprfect'ns Neeps/M Yards		Spin. trial	
				2.5% span	Unif		Zero Gage	1/8" Gage		Pct	Mps1	G/tex	Pct		No	Gra	Yel	8s or 74 tx	22sor 27 tx	8s or 74 tx	22sor 27 tx	8s or 74 tx		22sor 27 tx
No	Name & Code		32s	In	Pct	Rdg			Pct	Pct	No	No		Pct	Lbs	Lbs	Pct	Pct	No	No	No	No	No	
WINGATE																								
1	SLM	41	33	1.04	42	38	83	21	7.2	4.1	2	2	7.1	289	92	7.9	7.2	130	110	27	14	10	6	1/51
OKLAHOMA																								
GREENFIELD																								
1	SLM LT SP	42	33	1.02	43	42	90	25	6.6	6.1	3	4	8.0	322	102	7.4	6.4	130	120	30	14	12	0	49
MANCUM																								
1	SLM PLUS	40	32	1.00	45	46	84	22	7.0	3.8	2	3	5.7	288	93	7.5	6.3	130	120	25	16	8	0	47
2	MID LT SP	32	32	C.98	44	43	82	21	6.9	3.2	2	4	7.2	290	93	7.4	6.4	110	110	25	18	11	0	42
TEMPLE																								
2	SLM	41	32	0.99	46	43	89	23	7.0	4.0	3	3	7.7	279	95	7.4	6.4	130	120	24	4	6	2	46

1/ Parentheses indicate the neps per 1000 yards of yarn as measured by the Uster instrument.

Table 3-Cotton, American upland medium staple: Quality characteristics by production areas, crop of 1978.

Production Area, Classification & Sample Number				Fiber Test Results										Processing Test Results - Carded Yarns									
Grade		Stple		Digital Fibrograph		Mike	Fiber Strength		Elon- gat'n 1/8"	S.A. Non- Lint	Color		P & C Waste	Strength		Elongation		Appearance Index		Imprfct'ns Neps/M Yards		Spin. Potent- ial	
No	Name & Code	32s	In	Pct	Rdg		Mpsi	G/tex			Pct	Gra		Yel	No	No	22s or 27 tx	Lbs	Pct	22s or 27 tx	Pct		No
SOUTHWEST AREA																							
NORTHWEST TEXAS																							
BIG SPRING																							
1	LM LT SP	52	31	0.92	44	43	92	22	6.4	6.9	4	4	10.5	86	25	5.4	4.0	110	70	19	56	14	1/2 (242) 33
WEST AREA																							
ARIZONA																							
BUCKEYE																							
3	SLM	41	35	1.09	43	50	87	24	6.6	2.8	1	1	6.3	101	33	6.4	4.5	80	80	20	(50)	12	(336) 54
MARANA																							
3	LM	51	35	1.12	42	38	86	21	5.9	4.5	2	2	6.9	93	60	6.0	4.2	80	60	19	(56)	18	(430) 48
PEORIA																							
3	SLM	41	35	1.11	44	43	86	23	7.0	2.7	1	2	5.8	101	35	6.4	5.2	100	70	19	(74)	18	(274) 53
CALIFORNIA																							
WESTMCLAND																							
3	MID	31	35	1.09	43	48	89	24	6.4	2.2	0	2	4.7	106	35	6.0	4.5	100	80	18	(60)	13	(238) 52

1/ Parentheses indicate the neps per 1000 yards of yarn as measured by the Uster instrument.

Table 4--Cotton, American upland long staple: Quality characteristics by production areas, crop of 1978.

Production Area, Classification &				Fiber Test Results										Processing Test Results - Carded Yarns																										
Sample Number		Digital Fibrograph		Mike	Fiber Strength		Elon- gat'n 1/8"	S.A. Non- Lint	Color Raw Stock		P & C and Comber Waste	Strength		Elongation		Appearance Index		Imprfct'ns Neps/M Yards		Spin. Poten- tial																				
No	Grade	2.5% span	Unif.		Zero	1/8" Gage			Gra	Yel		22s or 27 tx	50s or 12 tx	22s or 27 tx	50s or 12 tx	22s or 27 tx	50s or 12 tx	22s or 27 tx	50s or 12 tx																					
Name & Code		Stple	32s	In	Pct	Rdg	Mpsi	G/tex	Pct	Pct	No	No	Lbs	Lbs	Pct	Pct	No	No	No	No																				
																					AREA																			
																					WEST																			
																					WEST TEXAS																			
																					PECOS																			
																					2 LM																			
51	35	1.11	42	36	85	24	310	5.6	4.1	2	3	9.8	103	35	5.7	4.6	100	70	29	24	19	292	58																	

1/ Parentheses indicate the neps per 1000 yards of yarn as measured by the Uster instrument.

* Comber Waste and Combed Yarn Data

Table 5.--Cotton, American upland extra long staple: Quality characteristics by production areas, crop of 1978.

Production Area, Classification & Sample Number				Fiber Test Results										Processing Test Results - Combed Yarns											
				Array Length		Mike	Fiber Strength		Elon- gat'n 1/8"	S.A. Non- Lint	Color Raw Stock		P & C Waste	Comber Waste	Strength		Elongation		Appearance Index		Imperfect's Neps/M Yards				
							Zero Gage	1/8" Gage			Gra	Yel			50s or 12 tx	80s or 7 tx	50s or 12 tx	80s or 7 tx	50s or 12 tx	80s or 7 tx	50s or 12 tx	80s or 7 tx			
No	Grade	Stple	32s	UQL	CV	Pct	In	Pct	Rdg	Mpsi	G/tex	Pct	Pct	No	No	Pct	Pct	No	No	No	No	No	No		
WEST AREA																									
ARIZONA																									
1	5	46	1.51	34		38	105	34	PIMA S-5	7.3	4.2	5	6	10.2	14.5	100 PERCENT	64	35	6.0	5.0	120	120	2	1/ (46) 1 (182)	
TONOPAH																									
2	4	46	1.47	32		38	102	37	PIMA S-5	6.6	3.1	4	4	6.8	13.8	100 PERCENT	68	37	5.7	4.9	110	120	1	(36) 1 (134)	
WENDEN																									
2	4	46	1.50	33		40	103	36	PIMA S-5	6.7	4.2	4	4	7.2	15.2	99 PERCENT	66	36	5.6	4.8	120	120	2	(38) 1 (98)	
WEST TEXAS																									
2	4	46	1.56	33		35	100	36	PIMA S-5	6.9	3.1	4	5	7.7	14.9	100 PERCENT	64	34	6.0	5.3	110	110	1	(40) 1 (150)	

1/ Parentheses indicate the neps per 1000 yards of yarn as measured by the Uster instrument.